

Name: \_\_\_\_\_

Date: \_\_\_\_\_

A



# ALGEBRA – CHAPTER 3 QUIZ

(Total Points Possible = 46)

**PART 1:** Complete each review problem below. SHOW YOUR WORK. (3 pts. each)

1. Evaluate each expression if  $x = 12$ ,  $y = -2$ , and  $z = 0$ .

A.  $3y^2 + 2x - 3z$

$$3(-2)^2 + 2(12) - 3(0)$$

$$3 \cdot 4 + 24 - 0$$

$$12 + 24 - 0$$

$$\boxed{36}$$

B.  $|y + 1| + \sqrt{12 + 2x}$

$$|(-2) + 1| + \sqrt{12 + 2(12)}$$

$$|-1| + \sqrt{12 + 24}$$

$$|-1| + \sqrt{36}$$

$$1 + 6$$

$$\boxed{7}$$

2. Solve for  $x$ .

A.

$$\frac{x}{5} = \frac{4}{7}$$

(cross-multiply)

$$\frac{20}{7} = \frac{7x}{7}$$

$$\boxed{2\frac{6}{7} = x}$$

B.  $-2 + 4x - 1 = 4 + x - 1$

$$4x - 3 = x + 3$$

$$4x - 6 = x$$

$$-4x + 6 = -4x + 6$$

$$\frac{-6}{-3} = \frac{-3x}{-3}$$

$$\boxed{2 = x}$$

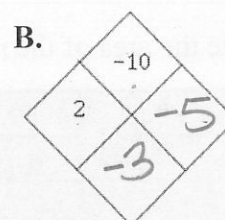
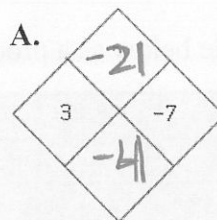
3.  $f(x) = 3x + 7$ . If  $f(x) = 28$ , what is  $x$ ?

\* When will  $3x + 7 = 28$

$$\frac{3x}{3} = \frac{21}{3}$$

\* when  $\boxed{x = 7}$

4. Complete each Diamond Problem (2 pts. each).



5. Write a linear equation to represent each situation.

A.

$x$	-3	-2	-1	0	1
$y$	-2	-5	-8	-11	-14

B.



Figure 1

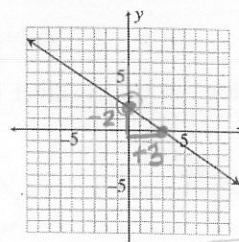


Figure 2



Figure 3

C.



$$m = -\frac{2}{3}$$

$$\boxed{y = -\frac{2}{3}x + 2}$$

$$m = \frac{\Delta y}{\Delta x} = \frac{-3}{+1}$$

$$b = -11$$

$$\boxed{y = -\frac{3}{1}x - 11}$$



#0 to 5

$$\boxed{y = 2x + 5}$$